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DATA CATALOG SYSTEMS FOR TUNA/LARGE PELAGIC FISHERIES

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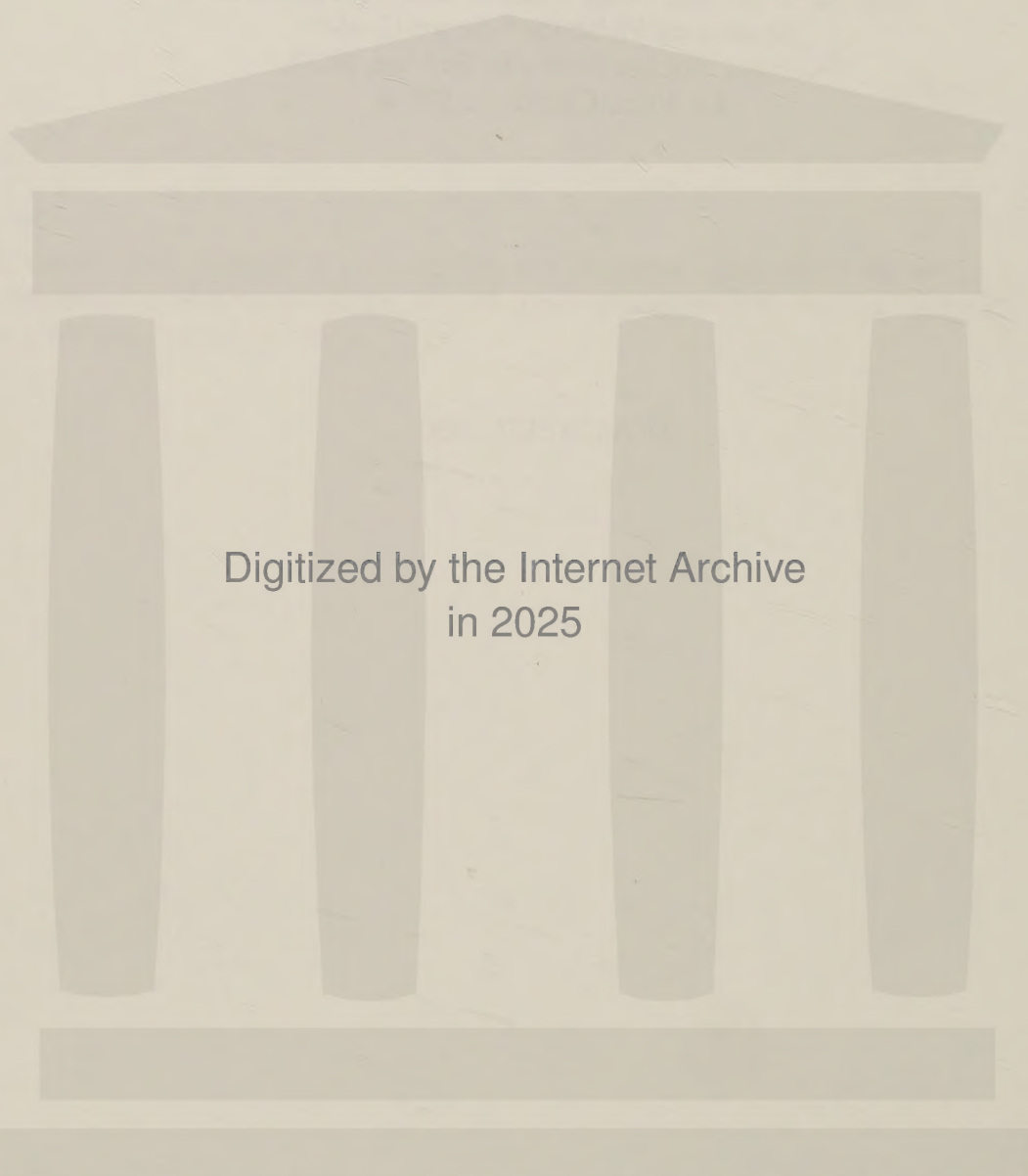
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I. INTRODUCTION

Three types of fisheries data on tuna and other large pelagic species are routinely stored on computerized data files by the National Marine Fisheries Service (NMFS), Southwest Fisheries Science Center (SWFSC): 1) total catch, 2) sample catch-effort and 3) sample length-frequency. The data are gathered from various contacts in fishing countries, international or national commissions or agencies or for U.S. fisheries through field sampling programs. The data are used by fisheries research scientists to monitor the condition of stocks of tunas, sharks and billfish throughout the world's Oceans and to evaluate the effects of fishing on the stocks.

The purpose of this paper is to provide documentation for systems used to catalog data files routinely maintained by the SWFSC. The files are arranged by data type and ocean. The catalog systems are written in the commercially available database package FOXBASE+ or dBase III+.

1.1. CATCH CATALOG DESCRIPTION

A sample of the catalog of catch data files for the Atlantic, Pacific, and Indian Oceans (CATDBCAT.DBF) is shown in Section IV. The catalog is stored in dBase III+ and can be interactively queried (see subsection 2.1). Definitions of the catalog headings are as follows;

OCEAN - Ocean where catches were made.

FISHERY - Fishery making catches.

BEGIN YEAR - First year of data series.

END YEAR - Last year of data series.

TUNAS - Data file contains catches (see UNIT) of tunas.

BILLFISH - Data file contains catches (see UNIT) of billfish.

SHARKS - Data file contains catches (see UNIT) of sharks.

OTHER - Data file contains catches (see UNIT) of other large pelagic fish species.

DATA AVAILABLE BY

GEAR - Gear type.

AREA - Smaller catch areas within the Ocean.

MONTH - Month of catch.

SOURCE - Source of catch statistics (Table 1)

UNIT - Units used to record catch information (e.g. metric tons, short tons, kilograms, etc.)

FILENAME - Name of file used to store catch data.

FILETYPE - Commercial database package used to archive data (LOTUS - data in spread sheet format, ASCII-formatted text files, dBase III+, etc.).

CONFIDENTIAL - Indicates whether data are confidential and subject to limited distribution.

1.2. CATCH-EFFORT CATALOG DESCRIPTION

A sample of the catalog of catch-effort data files for the Atlantic (ACECAT.DBF), is shown in Section V. Catalogs for Pacific and Indian Ocean data are in PCECAT.DBF and ICECAT.DBF, and are in the same format as the Atlantic catalog. The catalogs are dBase III+ files and can be interactively queried (see subsection 2.2). Definitions of the catalog headings are as follows;

YEAR - Year catch was made.

COUNTRY - Country making the catch.

GEAR - Gear type (see Table 2).

SPECIES - Major species caught (Table 3). Space limitations allow for only 6 species to be listed. Whenever 6 species are listed, other species may also be available.

KIND CATCH - Units used to record catches (Table 4).

KIND EFFORT - Units used to record fishing effort (Table 4).

TIME STRATA - Units of time used to record catches (e.g. month, year, quarter, etc.)

KIND SQUARE - Size of area latitude x longitude used to record catches (e.g. 5x5 - 5° square, 5x10 - 5° x10° square). Data may only be available by sampling site (ICCAT, SFA, ICCAT).

STANDARD FORMAT - Indicates whether the data are archived on type using SWFSC standard catch and effort data format (Table 5).

TAPE NAME - SWFSC tape used to archive data.

CONFIDENTIAL - Indicates whether the data are confidential and subject to limited distribution.

1.3. LENGTH-FREQUENCY CATALOG DESCRIPTION

A sample of the catalog of length-frequency data files for the Atlantic (ALFCAT.DBF) Ocean is shown in Section VI. Catalogs for Pacific and Indian Ocean data are in PLFCAT.DBF and ILFCAT.DBF, and are in the same format as the Atlantic catalog. The catalogs are dBase III+ files and can be interactively queried (see subsection 2.3). Definitions of the catalog headings are as follows;

YEAR - Year catch was made.

COUNTRY - Country making the catch.

GEAR - Gear type (Table 2).

SPECIES - Species sampled (Table 3).

TIME STRATA - Units of time used to record when this sampled species was caught.

M - Monthly

Q - Quarterly

Y - Yearly

KIND SQUARE - Size of area latitude x longitude used to record where this sampled species was caught. (AREA - statistical sampling area, UNK. - unknown area).

WEIGHT - Total catch is available to raise samples (Y - yes, N - no, and B - some have and some do not).

INTERVAL - Intervals of length used to record measurements (1 - 1 cm., 2 - 2 cm., etc.)

STANDARD FORMAT - Indicates whether the data are archived on tape using SWFSC standard length-frequency data format (Table 6).

SOURCE - Source of data (Table 1).

FILE TYPE - Entries are made here to note measurements other than fork length were taken or whether data are raised data versus sampled data (LD1-FL - original measurement was taken in predorsal length and the converted to fork length, RAISED - data is raised to the total catch).

TAPE - SWFSC tape used to archive data.

COMMENT - Any comments about the data. This comment is not printed in the catalog due to space limitations, but can be viewed through the on-line query.

CONFIDENTIAL - Indicates whether data are confidential and subject to limited distribution.

II. ONLINE QUERY AND UPDATE PROCEDURES

2.1. CATCH CATALOG

Online queries to the catch catalog can be made directly through the dBase III+ BROWSE or DISPLAY commands. Updates to the catalog are made using dBase III+ commands. The APPEND command is used to add data, the DELETE to remove data and the EDIT or BROWSE to change existing data.

2.2. CATCH-EFFORT CATALOGS

2.2.1. Online Query

The sample catch-effort catalogs can be accessed directly through dBase III+, using the DISPLAY or BROWSE command, or through a program (DCECAT) developed to display the catalogs. The program allows the user to display catalog entries by specifying a range of years, gear, country, species or tape name to search for. Data are displayed in year, country, gear, species and tape name order. The program is written in a commercial software package FOXBASE+. An example of the commands used to execute the program is as follows;

```
C:>FOXPLUS
```

```
.DO DCECAT
```

At this point the program displays a screen prompting the user for the ocean to search, range of years, country, gear, species or tape name. If any of the search parameters are left blank all possible values for that parameter are searched. The user can direct output to the screen or to a file by specifying a file name. Because of the space limitations on a computer screen, the user must specify which one of the elements, KIND SQ., TAPE, STANDARD FORMAT or CONFIDENTIAL is output. The following is an example of the displayed screen.

```

      CATCH-EFFORT CATALOG DISPLAY PROGRAM

This program will display records from one of the following 3 ocean
catalogs. Enter the letter of the one you wish to display.
ENTER A BLANK TO EXIT THE PROGRAM.

      (A)tltantic Ocean, (P)acific Ocean, (I)ndian Ocean ☐

Enter in the values for the following parameters that should be
searched for. The range of years is 1952-1988.
ENTER ALL BLANKS TO EXIT THE PROGRAM.

      BEGIN YEAR:           END YEAR: 
      COUNTRY NAME:       GEAR CODE: 
      SPECIES CODE:       TAPE NAME: 

      ENTER (S)CREEN OR (P)RINTER: ☐

      DISPLAY (K)IND SQ., (T)APE, (S)TD. FORMAT, OR (C)ONFIDENTIAL: ☐

      Hit any key to see the data..

```

2.2.2. Updates

Updates to the catalog are made by SWFSC staff through a program (UPCECAT) written in FOXBASE+. It is essential that the program be used when updating the catalogs so that the proper modifications are also made to the index files. The program allows for additions to the catalogs manually by individual records or automatically by multiple records (file). Other updating routines such as modifications and deletions to the catalogs are also supported. The following sequence of commands are executed to perform updates.

C:>FOXPLUS

.DO UPCECAT

At this point a screen is displayed with 8 user-selectable options.

```
-----CATCH-EFFORT CATALOG DATABASE UPDATE PROGRAM-----  
  
You are running the query and update program for the Catch-Effort  
Catalog database. Choose one of the following options, and then  
select the catalog database you want to work with.  
  
      (1) Add single record(s)  
      (2) Add several records from a file  
      (3) Modify a record(s)  
      (4) Delete a record(s)  
      (5) Sort the Catch-Effort Catalog Database  
      (6) Display a record(s)  
      (7) Exit to FOXBASE  
      (8) Exit to DOS  
  
Select an option:   
  
(A)tantic Ocean, (P)acific Ocean, (I)ndian Ocean: 
```

The user selects the appropriate option and ocean. Options 7 and 8 allow the user to exit the program. Options 1 to 6 allow the user to modify and view the catalogs. Each option displays unique screens to prompt the user for various actions.

Option 1: Add Single Record(s)

This option is used to manually add single records to the catalogs. The user must be sure that the proper catalog is being edited by checking the screen heading. The user is then prompted to enter data for each element in the database. If no data are available, blanks are entered. The user can choose to enter other records and the option of carrying over field-values is also available. The following screen is displayed to prompt the user.

ATLANTIC OCEAN CATCH-EFFORT CATALOG DATABASE ADDING ROUTINE

This routine will add a record to the Catch-Effort Catalog database.
Enter in values for each item below. ENTER BLANKS TO EXIT.

Enter last two digits of year:

Enter country name: Enter gear code:

Enter species codes:

Enter code for the kind of catch:

Enter code for the kind of effort:

Enter time strata: Enter kind of square:

Enter tape name: Standard format? (Y/N): ☐

Confidential? (Y/N): ☐

Do you want to add another record?(Y/N) ☐

Do you want to carry fields over?(Y/N): ☐

Option 2: Add Several Records From a File

This option is used to add several records from a file to the catalogs. The user must be sure that the proper catalog is being edited by checking the screen heading. The user is prompted to enter the name of a file containing the records to be added. The records in this file must be in the format of the catalog database. If duplicate records or data entry errors are found, no records are added to the catalog and an error file (DUPREC.TXT) is created listing all duplicate records and records with errors. A blank is entered to exit the routine. The following screen is displayed to prompt the user.

ATLANTIC OCEAN CATCH-EFFORT CATALOG DATABASE RECORD ADDING ROUTINE

This routine will add several records to the Catch-Effort Catalog database from an input file of records. Enter the name of the file containing the records to add. ENTER BLANKS TO EXIT THE ROUTINE.

Enter File Name:

There were no errors or duplicate records found in the input file. All records added to database.

Option 3: Modify a Record(s)

This option allows the user to make corrections to existing records. Before entering any information, the user must be sure that the correct catalog is being accessed by checking the screen heading. Two screens are used to prompt the user. The first queries the user for information needed to find the record to be modified.

ATLANTIC OCEAN CATCH-EFFORT CATALOG DATABASE MODIFY ROUTINE

This routine will modify records from the Catch-Effort Catalog database. Enter in the values for the items below which uniquely determine the record to be modified. ENTER BLANKS TO EXIT.

YEAR (last 2 digits):	COUNTRY NAME:
GEAR CODE:	SPECIES:
KIND OF CATCH:	KIND OF EFFORT:
TIME STRATA:	KIND OF SQUARE:
TAPE NAME:	
STANDARD FORMAT? (Y/N): ☐	CONFIDENTIAL? (Y/N): ☐

The second screen displays the record found. The user, after making sure that the displayed record is the right one, can make corrections to the record by moving to the appropriate element and making the change. Additional changes, to other records, can be made with the appropriate response to the last question on the screen.

EDIT SCREEN FOR THE ATLANTIC OCEAN CATCH-EFFORT CATALOG DATABASE

Change any field values as needed. Hit "Enter" to move to next field. Hit "Control-E" to back up one field.

YEAR: 75

COUNTRY NAME: SPAIN_____ GEAR CODE: BB__

SPECIES CODES: _____

KIND OF CATCH: METRIC TON

KIND OF EFFORT: D. AT SEA_

TIME STRATA: MONTH KIND OF SQUARE: 1x1__

TAPE NAME: AJSURF__ STANDARD FORMAT? (Y/N): Y

CONFIDENTIAL? (Y/N): N

Do you want to modify another record? (Y/N): ☐

Option 4: Delete a Record(s)

This option allows the user to delete records from a catalog. The user must be sure that the proper catalog is being used by checking the screen heading. The user then enters the information requested. The following is an example of the display used to prompt the user.

—ATLANTIC OCEAN CATCH-EFFORT CATALOG DATABASE DELETE ROUTINE—

This routine will delete records from the Catch-Effort Catalog database. Enter in the values for the items below which uniquely determine the record to be deleted. ENTER BLANKS TO EXIT.

YEAR (last 2 digits): COUNTRY NAME:

GEAR CODE: SPECIES:

KIND OF CATCH: KIND OF EFFORT:

TIME STRATA: KIND OF SQUARE:

TAPE NAME:

STANDARD FORMAT? (Y/N): ☐ CONFIDENTIAL? (Y/N): ☐

Are you sure you want to delete this record? (Y/N): ☐

Do you want to delete another record? (Y/N): ☐

Option 5: Sort the Catch-Effort Catalog Database

This option is used to sort the catalog. The user must be sure the correct data base is being sorted by checking the screen heading. The user is prompted to enter the catalog elements to sort over and the order to sort, ascending or descending. The user must also specify a new database filename as this routine creates a separate sorted catalog database. The following display is used to prompt the user.

—PACIFIC OCEAN CATCH-EFFORT CATALOG DATABASE SORTING ROUTINE—

This routine will sort records from the Catch-Effort Catalog database. Listed are fields of the catalog database which may be sorted over. Select the number(s) of the fields you wish to sort over, in order, and choose whether the field is to be sorted in ascending or descending order.

(1) YEAR
(2) COUNTRY
(3) GEAR
(4) KCAT
(5) KEFF
(6) TIME
(7) KSQR
(8) TAPE
(9) STDFORMAT
(10) CONFIDENT

Select the next field number to sort over:

(ENTER ZERO IF NO MORE):

(A)scending or (D)escending order?:

Enter the name of a database file to hold the sorted records

(ENTER BLANK TO EXIT ROUTINE):

SORTING

Sorting complete. Do you want to do another sort? (Y/N): ☐

Option 6: Display a Record(s)

After making changes to the catalogs, records modified can be viewed to verify changes by using this option. Records are displayed in year, country, gear, species and tape name order. The following display is used to prompt the user.

ATLANTIC OCEAN CATCH-EFFORT CATALOG DATABASE DISPLAY ROUTINE

This routine will display records from the Catch-Effort Catalog database. Enter in the values that should be searched for. If no value is entered in for an item below, all data will be given. The range of years is 1950-1985. If data for all years prior to a particular year are desired, just enter that year as the END YEAR. If data for all years after a particular year are desired, just enter that year as the BEGIN YEAR. ENTER BLANKS TO EXIT.'

BEGIN YEAR:	END YEAR:
COUNTRY NAME:	GEAR CODE:
SPECIES CODE:	TAPE NAME:
ENTER (S)CREEN OR (P)RINTER: ☐	
DISPLAY (K)IND SQ., (T)APE, (S)TD. FORMAT, OR (C)ONFIDENTIAL: ☐	

Hit any key to see the data...

2.3. LENGTH-FREQUENCY CATALOGS

2.3.1. Online query

The length-frequency catalogs can be accessed directly through dBase III+, using the DISPLAY or BROWSE command, or by using a program (DLFCAT) developed to display the catalogs. The program allows the user to enter range of years, gear, country, species or tape name to search for and displays all information meeting the specified criteria. Data are displayed in year, country, gear, species and tape name order. The program is written in a commercial software package FOXBASE+. An example of the commands used to execute the program is as follows;

```
C:>FOXPLUS
```

```
.DO DLFCAT
```

At this point the program asks the user for the ocean, range of years, species, gear and areas to search and display data. Due to the limited space on a computer screen, the user must specify whether catalog element SOURCE, FILETYPE, TAPE, or CONFIDENTIAL is displayed.


```

—LENGTH-FREQUENCY CATALOG DISPLAY PROGRAM—

This program will display records from one of the following 3
ocean catalogs. Enter the letter of the one you wish to display.
ENTER A BLANK TO EXIT THE PROGRAM.

    (A)tlanctic Ocean, (P)acific Ocean, (I)ndian Ocean ☐

Enter in the values for the following parameters that should be
searched for. The range of years is 1956-1984.
ENTER ALL BLANKS TO EXIT THE PROGRAM.

    BEGIN YEAR:           END YEAR: 
    COUNTRY NAME:       GEAR CODE: 
    SPECIES CODE:       TAPE NAME: 
    ENTER (S)CREEN OR (P)RINTER: ☐
    DISPLAY (S)OURCE, (F)ILETYPE, (T)APE, OR (C)ONFIDENTIAL: ☐

—Hit any key to see the data...—

```

2.3.2. Updates

Updates to the catalog will be made by SWFSC staff through a program written in FOXBASE+. It is essential that the program be used when updating the catalogs so that the proper modifications are also made to the index files. The updating program, UPLFCAT, allows for additions to the catalogs where records are entered individually or by a file where multiple records are entered automatically. Other updating routines such as modifications and deletions to existing records in the catalogs are also supported. The following sequence of commands are executed to perform updates.

C:>FOXPLUS

.DO UPLFCAT

At this point a screen is displayed with 8 user-selectable options.

```

—LENGTH-FREQUENCY CATALOG DATABASE UPDATE PROGRAM—

You are running the query and update program for the Length-
Frequency Catalog database. Choose one of the following options,
and then select the catalog database you want to work with.

    (1) Add single record(s)
    (2) Add several records from a file
    (3) Modify a record(s)
    (4) Delete a record(s)
    (5) Sort the Length-Frequency Catalog Database
    (6) Display a record(s)
    (7) Exit to FOXBASE
    (8) Exit to DOS          Select an option: ☐

    (A)tlanctic Ocean, (P)acific Ocean, (I)ndian Ocean: ☐

```

The user selects the appropriate option and ocean. Options 7 and 8 allow the user to exit the program. Options 1 to 6 allow the user to modify and view the catalogs. Each option displays unique screens to prompt the user for various actions.

Option 1: Add Single Record(s)

The first update option is to add single records to the catalogs. The user must be sure that the proper catalog is being edited by checking the screen heading. The user is then prompted to enter data for each element in the database. If no data are available, blanks are entered. The user can choose to enter other records and the option of carrying over fields entered in the current record is also available. The following screen is displayed to prompt the user.

```
—ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE ADDING ROUTINE—

This routine will add a record to the Length-Frequency Catalog
database. Enter in values for each item below. ENTER BLANKS
TO EXIT.

Last two digits of year:  Country name: 
Gear code:  Time strata: 
Species code:  Kind of square: 
Weight? (Y/N):  Interval: 
Source:  Filetype: 
Standard format? (Y/N):  Tape name: 
Comment:  Confidential? (Y/N): 

Do you want to add another record? (Y/N): 
Do you want to carry fields over? (Y/N): 
```

Option 2: Add Several Records From a File

The second update option is to add several records from a file to the catalogs. The user must be sure that the proper catalog is being edited by checking the upper left hand corner of the screen for the ocean. The user is prompted to enter the name of a file containing the records to be added. The records in this file must be in the format of the catalog database. If duplicate records or errors in data entry are found, no records are added to the catalog and an error file (DUPREC.TXT) is created listing all duplicate records and data entry errors. The following screen is displayed to prompt the user.

```
—ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE RECORD ADDING ROUTINE—

This routine will add several records to the length-
Frequency catalog database from an input file of records.
Enter the name of the file containing the records to add.
ENTER BLANKS TO EXIT THE ROUTINE.

Enter File Name: 

There were no errors or duplicate records found in
the input file. All records added to database.
```

Option 3: Modify a Record(s)

This option allows the user to make corrections to existing records. Before entering

any information, the user must be sure that the correct catalog is being accessed by checking the screen heading. Two screens are used to prompt the user. The first queries the user for information needed to find the record to be changed.

```

—ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE MODIFY ROUTINE—

This routine will modify records from the Length-Frequency
Catalog database. Enter in the values for the items below
which uniquely determine the record to be modified. ENTER
BLANKS TO EXIT.

YEAR (last 2 digits):     COUNTRY NAME: 
GEAR CODE:             TIME STRATA: 
SPECIES CODE:         KIND OF SQUARE: 
WEIGHT? (Y/N):       INTERVAL: 
TAPE NAME: 

```

The second screen displays the record found. The user, after making sure that the displayed record is the right one, can make corrections to the record by moving to the appropriate element and making the change. Additional changes, to other records, can be made with the appropriate response to the last question on the screen.

```

—EDIT SCREEN FOR THE ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE—

Change any field values as needed. Hit "Enter" to move to the
next field. Hit "Control-E" to back up one field.

Last two digits of year:     Country name: 
Gear code:             Time strata: 
Species code:         Kind of square: 
Weight? (Y/N):       Interval: 
Source:             Filetype: 
Standard format? (Y/N):     Tape name: 
Comment:         Confidential? (Y/N): 

Do you want to modify another record? (Y/N): 

```

Option 4: Delete a Record(s)

This option allows the user to delete records from a catalog. The user must be sure that the proper catalog is being used by checking the screen heading. Two screens are displayed to prompt the user. The first screen asks the user to identify the record to be deleted.

ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE DELETE ROUTINE	
This routine will delete records from the Length-Frequency Catalog database. Enter in the values for the items below which uniquely determine the record to be deleted. ENTER BLANKS TO EXIT.	
YEAR (last 2 digits):	COUNTRY NAME:
GEAR CODE:	TIME STRATA:
SPECIES CODE:	KIND OF SQUARE:
WEIGHT? (Y/N):	INTERVAL:
TAPE NAME:	

The second screen is displayed to allow the user to verify that the record shown is to be deleted.

DELETE SCREEN FOR THE ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE	
Year (last two digits): 67	Country name: CANADA
Gear code: PS	Time strata: M
Species code: YFT	Kind of square: 5X5
Weight? (Y/N): Y	Interval: 2
Source: DR 2	Filetype:
Standard format? (Y/N): Y	Tape name: LFDB3
Comment:	Confidential? (Y/N): N
Are you sure you want to delete this record? (Y/N): N	
RECORD IS NOT BEING DELETED!	
Do you want to delete another record? (Y/N):	

Option 5: Sort the Catch-Effort Catalog Database

This option is used to sort the catalog. The user must be sure the correct catalog is being sorted by checking the screen heading. The user is prompted to enter the catalog elements to sort over and the order to sort, ascending or descending. The user must also specify a new database filename as this routine creates a separate sorted catalog database. The following display is used to prompt the user.

—ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE SORTING ROUTINE—

This routine will sort records from the Length-Frequency Catalog database. Listed are fields of the catalog database which may be sorted over. Select the number(s) of the fields you wish to sort over, in order, and choose whether the field is to be sorted in ascending or descending order.

- (1) YEAR
- (2) COUNTRY
- (3) GEAR
- (4) TIME
- (5) SPECIES
- (6) AREA
- (7) WEIGHT
- (8) INTERVAL
- (9) SOURCE
- (10) FILETYPE
- (11) STD FORMAT
- (12) TAPE
- (13) COMMENT
- (14) CONFIDENT

Select the next field number to sort over (ENTER ZERO IF NO MORE): ☐

(A)scending or (D)escending order?: ☐

Enter the name of a database file to hold the sorted records

(hit "Enter" to exit routine):

SORTING

Sorting complete. Do you want to do another sort? (Y/N): ☐

Option 6: Display a Record(s)

After making changes to the catalogs, records modified can be viewed to verify changes by using this option. Records are displayed in year, country, gear, species and tape name order. The following display is used to prompt the user.

—ATLANTIC OCEAN LENGTH-FREQUENCY CATALOG DATABASE DISPLAY ROUTINE—

This routine will display records from the Length-Frequency Catalog database. Enter in the values that should be searched for. If no value is entered in for an item below, all data will be given. The range of years is 1950-1988. If data for all years prior to a particular year are desired, just enter that year as the END YEAR. If data for all years after a particular year are desired, just enter that year as the BEGIN YEAR. ENTER BLANKS TO EXIT.

BEGIN YEAR:

END YEAR:

COUNTRY NAME:

GEAR CODE:

SPECIES CODE:

TAPE NAME:

ENTER (S)CREEN OR (P)RINTER: ☐

DISPLAY (S)OURCE, (F)ILETYPE, (T)APE, OR (C)ONFIDENTIAL: ☐

Hit any key to see the data...

III. CATALOG CODES AND DATA FORMATS

Table 1: Data source codes used on Southwest Fisheries Science Center data catalogs.

Table 2: Gear codes used in Southwest Fisheries Science Center data catalogs.

Table 3: Species codes used in Southwest Fisheries Science Center data catalogs.

Table 4: Effort and catch codes used in Southwest Fisheries Science Center data catalogs.

Table 5: Standard catch-effort data format for Southwest Fisheries Science Center data files.

Table 6: Standard length-frequency data format for Southwest Fisheries Science Center data files.

Table 1: Data source codes used on Southwest Fisheries Science Center data catalogs.

CODE	DESCRIPTION
BIO STN	Biological station, St. Andrews - Canada.
CNEXO	Centre National pour l'Exploitation des Oceans - France.
CIR	Circular of the International Commission for the Conservation of Atlantic Tunas (ICCAT).
CF&G	California Department of Fish and Game.
CRO	Centre de Recherches Oceanographiques.
CRODT	Centre de Recherches Oceanographiques - Dakar-Thiaroye.
CUBAPESCA	Cuba
DEP.INV.PESQ.	Departamento de Investigaciones Pesqueras - Argentina.
DGDP	Direccion General de Desarrollo Pesquero - Venezuela.
DR X	ICCAT Data Record volume X.
ESPI	Ente Siciliano Per La Promozione Industriale - Italy.
FAO	Food and Agriculture Organization of the United Nations.
FRU	Fishery Research Unit - Ghana.
FSFRL	Far Seas Fisheries Research Laboratory - Japan.
GFCM	General Fisheries Council for the Mediterranean.
GOVT	Government.
HDAR	Hawaii Department of Aquatic Resources.
HOOFD	HOOFD & RAMOS publication.
ICES	International Council for the Exploitation of the Sea.
ICCAT	International Commission for the Conservation of Atlantic Tunas.
IEO	Instituto Espanol de Oceanografia - Spain.
INAPE	Instituto de Pesca Maritima - Uruguay.
IP	Centro Investigaciones Pesqueras - Venezuela.
IPM	Instituto de Pesca Maritima - Brasil.
IPTP	Indo-Pacific Tuna Program.
ISPM	Institut Scientifique des Peches Maritimes - Morocco.

Table 1 (continued)

CODE	DESCRIPTION
ISTPM	Institut Scientifique et Technique des Peches Maritimes - France.
JAP. BUL.	Japanese publication.
LAB.BENGUELA	Laboratorio Provincial de Benguela - Angola.
MADEIRA GOVT.	Servico de Pescas, Regiao Autonoma da Madeira - Portugal.
MIP	Ministerio de la Industria Pesquera - Cuba.
NMFS	National Marine Fisheries Service.
NPAW	North Pacific Albacore Workshop.
ODF&W	Oregon Department of Fish and Wildlife.
ORSTOM	Office de la Recherche Scientifique et Technique Outre-Mer - France.
SCRS	Standing Committee on Research and Statistics - ICCAT.
SFA	Seychelles Fishing Authority.
S.F.	Sea Fisheries Institute - South Africa.
SHFC	Saint Helena Fisheries Council.
SPAR	South Pacific Albacore Research Workshop.
SUBS.PESCA	Subsecretaria de pesca - Argentina.
SUDEPE	Superintendencia do Desenvolvimento de Pesca - Brasil.
SS X	ICCAT Statistical Series Volume X.
TAIW.UNIV.	National Taiwan University - China- Taiwan.
UNIV.ACORES	Universidade dos Acores - Portugal.
VNIRO	All-Union Research Institute of Marine Fisheries and Oceanography - USSR.
WDF	Washington Department of Fisheries.
WGBF	ICCAT Working Group on Bluefin, 1979.
WHOI	Woods Hole Oceanographic Institution - USA.

Table 2: Gear codes used in Southwest Fisheries Science Center data catalogs.

CODE	GEAR
BAG	BAG NET
BB	BAITBOAT (LIVE BAIT)
BBCO	BAITBOAT COASTAL
BBDW	BAITBOAT DISTANT-WATER
BBF	BAITBOAT FREEZER
BBI	BAITBOAT ICED-WELL
BBMN	BAITBOAT MECH./NON-MECH. COMB
BBN	BAITBOAT NON-MECHANIZED
BBOF	BAITBOAT OFF-SHORE
FC	FISH CORRAL
GILL	GILL-NET
HAND	HANDLINES
HARP	HARPOON
HOOK	HOOK AND LINE
HS	HAUL SEINE
HTRP	HOOK & TRAP
LIFT	
LL	LOGLINE
LLCO	LOGLINE COASTAL
LLDW	LOGLINE DISTANT-WATER
LLFB	LOGLINE FOREIGN-BASED
LLHB	LOGLINE HOME-BASED
LLMB	LOGLINE MOTHER BOAT
LLOF	LOGLINE OFF-SHORE
MTWD	
MWT	MID-WATER TRAWL
PS	PURSE SEINE
PSD	PURSE SEINE DOUBLE-BOAT
PSFB	PURSE SEINE FISH BIG
PSFS	PURSE SEINE FISH SMALL
PSG	PURSE SEINE LARGE
PSLB	PURSE SEINE WITH LIVE BAIT
PSLU	LUERING PURSE SEINE
PSM	PURSE SEINE MEDIUM
PSP	PURSE SEINE WITH PAYAO
PSR	

Table 2 (Continued)

CODE	GEAR
PSS	PURSE SEINE SMALL
RIN	RING NET
RINF	RING NET WITH FREE SCHOOL
RINP	RING NET WITH PAYAO
RR	ROD-AND-REEL
RRFB	ROD-AND-REEL FISH BIG
RRFS	ROD-AND-REEL FISH SMALL
SEN	SEINE NET
SPOR	SPORT FISHERIES
SURF	SURFACE
TN	TRAMMEL NET
TRAP	TRAP
TRAW	TRAWL
TROL	TROLL
UNCL	UNCLASSIFIED

Table 3. Species codes used in Southwest Fisheries Science Center data catalogs.

CODE	SPECIES
ALB	ALBACORE TUNA
ASK	ANGEL SHARKS, SAND DEVILS
BAR	BARRACUDA
BEP	EASTERN PACIFIC BONITO
BET	BIGEYE TUNA
BFT	BLUEFIN TUNA
BGT	BIG TUNAS, UNCLASSIFIED
BIL	BILLFISHES NEI
BIP	STRIPED BONITO
BKJ	BLACK SKIPJACK
BLF	BLACKFIN TUNA
BLM	BLACK MARLIN
BLT	BULLET TUNA
BLZ	INDO-PACIFIC BLUE MARLIN
BON	ATLANTIC BONITO
BOP	PLAIN BONITO
BSD	BIG-EYED SCAD
BSK	BASKING SHARK
BUM	BLUE MARLIN
CAV	CAVALLA
CER	CERO
CHM	CAPE ELEPHANTFISH
COM	NARROW-BARRED KING MACKEREL
DGH	DOGFISHES AND HOUNDS
DGS	PICKED(=SPINY) DOGFISH
DGX	SHARKS, DOGFISH
DOT	DOG TOOTHED TUNA
ELF	ELEPHANTFISHES
FLF	FLYING FISH
FRI	FRIGATE TUNA
FRZ	FRIGATE AND BULLET TUNAS
GEM	GEMFISH
GRP	GROUPE
GSK	GREENLAND SHARK
GUD	CHOLA GUITARFISH
GUF	PERUVIAN GUITARFISH
GUT	INDO-PACIFIC KING MACKEREL

Table 3. (Continued)

CODE	SPECIES
HAD	HAIRFISHES, CUTLASSFISHES
HBK	HALF BEAK
KAW	LITTLE TUNA, KAWAKAWA
KGM	KING MACKEREL
KGX	SEERFISHES NEI
LHT	LARGEHEAD HAIRTAIL
LOT	LONGTAIL TUNA
LSK	LIVEROIL SHARKS
LSK	LARGE SKIPJACK
LTA	ATLANTIC LITTLE TUNA
MAA	SPOTTED CHUB MACKEREL
MAC	MACKEREL
MAC	ATLANTIC MACKEREL
MAS	CHUB MACKEREL
MAW	WEST AFRICAN SPANISH MACKEREL
MKX	MACKEREL-LIKE FISHES NEI
MLS	STRIPED MARLIN
NPH	JAPANESE SPANISH MACKEREL
OTH	OTHER SPECIES, NEI
POR	PORBEAGLE
PRT	PIRIT
RAB	SHORT MACKEREL
RAG	INDIAN MACKEREL
RAX	INDIAN MACKERELS NEI
ROF	ROCK FISH
RSD	ROUND SCAD
RSK	REQUIEM SHARKS
SAI	ATLANTIC SAILFISH
SAI	INDO-PACIFIC SAILFISH
SAW	SAWFISH
SBF	SOUTHERN BLUEFIN TUNA
SDN	SARDINES
SDP	PATAGONIAN SMOOTHHOUND
SDV	SMOOTHHOUNDS
SFS	SILVER SCABBARDFISH

Table 3. (Continued)

CODE	SPECIES
SHK	SHARKS
SHX	SHARKS, UNC.
SIE	PACIFIC SIERRA
SKA	SKATES NEI
SKH	VARIOUS SHARKS NEI
SKJ	SKIPJACK TUNA
SKX	SHARKS, RAYS, SKATES
SLM	SALMON
SLT	SLENDER TUNA
SMT	SMALL TUNAS, UNCLASSIFIED
SNK	SNOEK
SPF	SPEARFISH
SRX	SKATES AND RAYS NEI
SSK	SMALL SKIPJACK
SSM	SPANISH MACKEREL
STS	STREAKED SEERFISH
SWO	SWORDFISH
TUN	TUNA NEI
TUX	TUNA-LIKE FISHES NEI
WAH	WAHOO
WHM	WHITE MARLIN
WSM	WHITE SNAKE MACKEREL
WST	WHIP STINGRAY
YFT	YELLOWFIN TUNA
YOU	YOUNG TUNAS

Table 4. Effort and catch codes used in Southwest Fisheries Science Center data catalogs.

EFFORT

CODES	DESCRIPTION
NO DATA	No data available
D. FISH.	Days fishing
D. FISH. G	Days at fishing ground
D. AT SEA	Days at sea
NO. SETS	Number of sets made
SUC. SETS	Successful sets made
NO. TRIPS	Number of trips made
NO. HOOKS	Number of Hooks
N. POLE-D	Number of pole days
NO. LINES	Number of lines used
NO. BOATS	Number of boats
TRAP D.	Trap days
FISH HOUR	Number of fishing hours
NO. TRAPS	Number of traps
SUC.D.FISH	Successful days fishing
LINE HRS	Number of lines hours
MAN HR/TRP	Number of man hours per trap
HAULS	Number of hauls
MAN DAYS	Man Days
NO. POLES	Number of poles

CATCH

CODES	DESCRIPTION
METRIC TON	Round weight in metric tons
SHORT TON	Round weight in short tons
NO. FISH	Numbers of fish
GG DWT R	Gilled and gutted dressed weight
CONV. RD	Converted from GG GWT R to METRIC TON
LBS	Pounds
KILOGRAMS	Kilograms

Table 5. Standard catch-effort data format for Southwest Fisheries Science Center data files.

COLUMNS	FORMAT	VARIABLES	COMMENTS
1 - 3	I3	Country	Coded numeric.
4 - 5	I2	Year	Last two digits.
6 - 7	I2	Gear	Coded numeric.
8 - 9	I2	Month	1 = Jan,...,12 = Dec. 13 = 1st quarter (Jan-Mar), 14 = 2nd quarter (Apr-June), 15 = 3rd quarter (July-Sep), 16 = 4th quarter (Oct-Dec). 17 = Yearly data.
10 - 11	I2	Kind of Square	Coded numeric.
12 - 12	I1	Quadrant	1=Northeast, 2=Southeast, 3=Southwest, 4=Northwest.
13 - 14	I2	Latitude	DD=Degree.
15 - 17	I3	Longitude	DDD=Degree.
18 - 20	I3	Landing site	Coded numeric.
21 - 23	I3	Statistical Region	Coded numeric.
24 - 25	I2	Kind of catch	Coded numeric.
26 - 27	I2	Kind of effort	Coded numeric.
28 - 30	I3	Coverage rate	0 - 100.
31 - 32	I2	Number of catches	
33 - 42	F10.1	Effort	
43 - 50	A8	Data source	
51 - 53	I3	Species code 1	Coded numeric.
54 - 62	F9.1	Catch	
63 - 65	I3	Species code 2	Coded numeric.
66 - 74	F9.1	Catch	
75 - 77	I3	Species code 3	Coded numeric.
78 - 86	F9.1	Catch	
87 - 89	I3	Species code 4	Coded numeric.
90 - 98	F9.1	Catch	
99 -101	I3	Species code 5	Coded numeric.
102 -110	F9.1	Catch	
111 -113	I3	Species code 6	Coded numeric.
114 -122	F9.1	Catch	
123 -125	I3	Species code 7	Coded numeric.
126 -134	F9.1	Catch	
135 -137	I3	Species code 8	Coded numeric.
138 -146	F9.1	Catch	
147 -149	I3	Species code 9	Coded numeric.
150 -158	F9.1	Catch	
159 -161	I3	Species code 10	Coded numeric.
162 -170	F9.1	Catch	
171 -173	I3	Species code 11	Coded numeric.

Table 5. (Continued)

COLUMNS	FORMAT	VARIABLES	COMMENTS
174 -182	F9.1	Catch	
183 -185	I3	Species code 12	Coded numeric.
186 -194	F9.1	Catch	
195 -197	I3	Species code 13	Coded numeric.
198 -206	F9.1	Catch	

Table 6. Standard length-frequency data format for Southwest Fisheries Science Center data files.

A: HEADER RECORDS:

COLUMNS	FORMAT	VARIABLES	COMMENTS
1 - 3	I3	Country	Coded numeric.
4 - 5	I2	Year	Last two digits.
6 - 7	I2	Gear	Coded numeric.
8 - 9	I2	Month	1 = Jan,...,12 = Dec. 13 = 1st quarter (Jan-Mar), 14 = 2nd quarter (Apr-June), 15 = 3rd quarter (July-Sep), 16 = 4th quarter (Oct-Dec). 17 = Yearly data.
10 - 11	I2	Kind of Square	Coded numeric.
12 - 12	I1	Quadrant	1=Northeast, 2=Southeast, 3=Southwest, 4=Northwest.
13 - 14	I2	Latitude	DD=Degree.
15 - 17	I3	Longitude	DDD=Degree.
18 - 20	I3	Landing site	Coded numeric.
21 - 23	I3	Statistical Region	Coded numeric.
24 - 26	I3	Species	Coded numeric.
27 - 31	F5.1	Begin Value	In unit intervals.
32 - 34	F3.0	Interval	In unit intervals.
35 - 39	F5.1	End value	In unit intervals.
40 - 47	F8.2	Weight of Catch	Metric Tons
48 - 48	I1	Unit of interval	1=Centimeters, 2=kgs, 3=pounds, 4=years, 5=months, 6=inches.
49 - 70	22X	Blank spaces	
71 - 72	I2	Frequency type	Coded numeric.
73 - 80	A8	Data Source	

B: FREQUENCY RECORDS (As many as Header record indicates)

1 -10	F10.2	Frequency 1	1st frequency on the record.
11 -20	F10.2	Frequency 2	2nd frequency on the record.
...			
...			
61 -70	F10.2	Frequency 7	7th frequency on the record.
71 -80	F10.2	Frequency 8	8th frequency on the record.

IV. SAMPLE CATCH CATALOG

ALL OCEANS

OCEAN	FISHERY	BEGIN YEAR	END YEAR	TUNAS	BILLFISH	SHARKS	OTHER	DATA AVAILABLE BY			SOURCE	UNIT	FILENAME	FILETYPE	CON- FIDENTIAL
								GEAR	AREA	MONTH					
ATLANTIC	VARIOUS	1950	1987	Y	Y	N	Y	Y	Y	N	ICCAT	METRIC TONS	CATDB	FOXBASE	N
ATLANTIC	VARIOUS	1970	1986	Y	Y	Y	Y	N	Y	N	FAO	METRIC TONS	PICAT	FOXBASE	N
INDIAN	VARIOUS	1970	1986	Y	Y	Y	Y	S	Y	N	FAO	METRIC TONS	PICAT	FOXBASE	N
INDIAN	SEYCHELLES	1983	1989	Y	N	N	N	Y	Y	Y	SFA	METRIC TONS	CAT	LOTUS	N
PACIFIC	VARIOUS	1970	1986	Y	Y	Y	Y	S	Y	N	FAO	METRIC TONS	PICAT	FOXBASE	N
N. PACIFIC	ALBACORE	1952	1988	Y	N	N	N	Y	Y	N	NPAC WORK.	METRIC TONS	NPALB	LOTUS	N
S. PACIFIC	ALBACORE	1952	1988	Y	N	N	N	Y	Y	N	SPAR WORK.	METRIC TONS	SPALB	LOTUS	N

V. SAMPLE CATCH-EFFORT CATALOGS

ATLANTIC OCEAN

YEAR	COUNTRY	GEAR	SPECIES	KIND CATCH	KIND EFFORT	TIME STRATA	KIND SQUARE	STANDARD FORMAT	TAPE NAME	CONFIDENTIAL	
50	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
50	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
50	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
51	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
51	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
51	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
52	FRANCE	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	OATLCE	N	
52	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
52	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
52	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
53	FRANCE	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	OATLCE	N	
53	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
53	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
53	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
54	FRANCE	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	OATLCE	N	
54	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
54	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
54	TUNISIA	TRAP	BFT	METRIC TON	TRAP D.	MONTH	5X5	Y	OATLCE	N	
54	TUNISIA	TRAP	BFT	NO. FISH	TRAP D.	MONTH	5X5	Y	OATLCE	N	
54	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
55	FRANCE	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	OATLCE	N	
55	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
55	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	OATLCE	N	
55	TUNISIA	TRAP	BFT	METRIC TON	TRAP D.	MONTH	5X5	Y	OATLCE	N	
55	TUNISIA	TRAP	BFT	NO. FISH	TRAP D.	MONTH	5X5	Y	OATLCE	N	
55	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
56	CANADA	SPOR	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	OATLCE	N	
56	FRANCE	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	OATLCE	N	
56	JAPAN	LL	BFT	NO. FISH	NO. HOOKS	MONTH	5X5	Y	Y	OATLCE	N
56	MOROCCO	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	Y	OATLCE	N
56	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	Y	OATLCE	N
56	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	Y	OATLCE	N
56	YUGOSLAVIA	PS	BFT	METRIC TON	NO. BOATS	YEAR	5X5	Y	Y	OATLCE	N
57	CANADA	SPOR	BFT	METRIC TON	NO. BOATS	YEAR	1X1	Y	Y	OATLCE	N
57	FRANCE	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	Y	OATLCE	N
57	JAPAN	LL	BFT	NO. FISH	NO. HOOKS	MONTH	5X5	Y	Y	OATLCE	N
57	MOROCCO	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	Y	OATLCE	N
57	SPAIN	BB	BFT	METRIC TON	D. AT SEA	YEAR	1X1	Y	Y	OATLCE	N
57	SPAIN	TRAP	BFT	METRIC TON	NO. TRAPS	YEAR	1X1	Y	Y	OATLCE	N
57	SPAIN	TRAP	BFT	NO. FISH	NO. TRAPS	YEAR	1X1	Y	Y	OATLCE	N
57	TUNISIA	TRAP	BFT	METRIC TON	TRAP D.	MONTH	5X5	Y	Y	OATLCE	N

VI. SAMPLE LENGTH-FREQUENCY CATALOGS

ATLANTIC OCEAN

YEAR	COUNTRY	GEAR	SPECIES	TIME STRATA	KIND SQUARE	WEIGHT	INTERVAL	STANDARD FORMAT	SOURCE	FILE TYPE	TAPE	COMMENT	CONFIDENTIAL
56	JAPAN	LL	BET	Q	AREA	N	4	Y	FSFRL		BEBILL	NOT IN ICCAT CAT.	N
56	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
57	JAPAN	LL	BET	Q	AREA	N	4	Y	FSFRL		BEBILL	NOT IN ICCAT CAT.	N
57	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
59	JAPAN	LL	BET	Q	AREA	N	4	Y	FSFRL		BEBILL	NOT IN ICCAT CAT.	N
59	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
60	JAPAN	LL	BET	Q	AREA	N	4	Y	FSFRL		BEBILL	NOT IN ICCAT CAT.	N
60	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
62	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
63	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
64	CANADA	PS	SKJ	M	20X20	Y	1	Y	ICCAT		LFD84S		N
64	JAPAN	LL	YFT	Q	10X20	N	2	Y	FSFRL		LFD83		N
65	CANADA	PS	SKJ	M	20X20	Y	1	Y	ICCAT		LFD84S		N
65	FIS	BB	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
65	FIS	PS	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
65	JAPAN	BBF	YFT	M	5X5	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
65	JAPAN	LL	ALB	M	10X20	N	1	Y	ICCAT		BGALBLF		N
65	JAPAN	LL	BET	M	10X20	N	2	Y	ICCAT		BEBILL		N
65	JAPAN	LL	YFT	M	10X20	N	2	Y	FSFRL	SOME LD1-FL	LFD83		N
65	USSR	LL	ALB	M	AREA	N	10	Y	DR 1		BGALBLF		N
65	USSR	LL	YFT	Q	5X5	N	2	Y	ICCAT		LFD83		N
66	FIS	BB	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
66	FIS	PS	YFT	M	AREA	N	2	Y	ORSTOM	LD1-FL	LFD83		N
66	JAPAN	LL	ALB	M	10X20	N	1	Y	ICCAT		BGALBLF		N
66	JAPAN	LL	BET	M	10X20	N	2	Y	ICCAT		BEBILL		N
66	JAPAN	LL	YFT	M	10X20	N	2	Y	FSFRL		LFD83		N
66	USSR	LL	ALB	Q	AREA	N	5	Y	DR 1		BGALBLF		N
66	USSR	LL	YFT	Q	5X5	N	2	Y	ICCAT		LFD83		N
67	CANADA	PS	YFT	M	5X5	Y	2	Y	DR 2		LFD83		N
67	FIS	BB	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
67	FIS	PS	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
67	JAPAN	BBF	YFT	M	5X5	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
67	JAPAN	LL	ALB	M	10X20	N	1	Y	ICCAT		BGALBLF		N
67	JAPAN	LL	BET	M	10X20	N	2	Y	ICCAT		BEBILL		N
67	JAPAN	LL	YFT	M	10X20	N	2	Y	FSFRL		LFD83		N
67	USSR	LL	ALB	Q	AREA	N	5	Y	DR 1		BGALBLF		N
67	USSR	LL	YFT	Q	5X5	N	2	Y	ICCAT		LFD83		N
67	CANADA	PS	YFT	M	5X5	Y	2	Y	DR 2		LFD83		N
67	FIS	BB	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
67	FIS	PS	YFT	M	AREA	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
67	JAPAN	BBF	YFT	M	5X5	Y	2	Y	ORSTOM	LD1-FL	LFD83		N
67	JAPAN	LL	ALB	M	10X20	N	1	Y	ICCAT		BGALBLF		N
67	JAPAN	LL	BET	M	10X20	N	2	Y	ICCAT		BEBILL		N
67	JAPAN	LL	YFT	M	10X20	N	2	Y	FSFRL		LFD83		N
67	JAPAN	LL	BUM	M	10X20	N	1	Y	ICCAT		BGALBLF		N
67	JAPAN	LL	BET	M	AREA	Y	2	Y	ICCAT	EYEFORK	BEBILL	NOT IN ICCAT CAT.	N
67	JAPAN	LL	YFT	M	10X20	N	2	Y	FSFRL	SOME LD1-FL	LFD83		N
67	JAPAN	PS	BET	M	5X10	N	2	Y	DR 2		LFD84S		N
67	JAPAN	PS	SKJ	M	5X10	N	1	Y	DR 2		LFD83		N
67	JAPAN	PS	YFT	M	5X10	Y	2	Y	DR 2		LFD83		N
67	JAPAN	PS	YFT	M	5X5	N	2	Y	ICCAT		LFD83		N
67	USSR	LL	YFT	Q	10X10	Y	2	Y	DR 2		LFD83		N
68	CANADA	PS	YFT	Y	10X10	Y	2	Y	DR 2		LFD83		N
68	FIS	BB	SKJ	M	AREA	N	1	Y	ORSTOM		LFD84S	NOT IN CATALOG	N

